Translation

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference FP03-0059-00	FOR FURTHER ACTION	See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)
International application No. PCT/JP03/04357	International filing date (*day/month/year*) 04 April 2003 (04.04.03)	Priority date (*day/month/year*) 05 April 2002 (05.04.02)
International Patent Classification (IPC) or national classification and IPC H05G 1/32		
Applicant HAMAMATSU PHOTONICS K.K.		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 5 sheets, including this cover sheet.

☐ This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of _____ sheets.

3. This report contains indications relating to the following items:

- I ☒ Basis of the report
- II ☐ Priority
- III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☐ Certain defects in the international application
- VIII ☐ Certain observations on the international application

Date of submission of the demand 04 April 2003 (04.04.03)	Date of completion of this report 03 September 2003 (03.09.2003)
Name and mailing address of the IPEA/JP Facsimile No.	Authorized officer Telephone No.

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.
PCT/JP03/04357

I. Basis of the report

1. With regard to the **elements** of the international application:*

☒ the international application as originally filed

☐ the description:

pages _____, as originally filed

pages _____, filed with the demand

pages _____, filed with the letter of _____

☐ the claims:

pages _____, as originally filed

pages _____, as amended (together with any statement under Article 19

pages _____, filed with the demand

pages _____, filed with the letter of _____

☐ the drawings:

pages _____, as originally filed

pages _____, filed with the demand

pages _____, filed with the letter of _____

☐ the sequence listing part of the description:

pages _____, as originally filed

pages _____, filed with the demand

pages _____, filed with the letter of _____

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.
These elements were available or furnished to this Authority in the following language _____ which is:

☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).

☐ the language of publication of the international application (under Rule 48.3(b)).

☐ the language of the translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

☐ contained in the international application in written form.

☐ filed together with the international application in computer readable form.

☐ furnished subsequently to this Authority in written form.

☐ furnished subsequently to this Authority in computer readable form.

☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.

☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. ☐ The amendments have resulted in the cancellation of:

☐ the description, pages _____

☐ the claims, Nos. _____

☐ the drawings, sheets/fig _____

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).**

* *Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rule 70.16 and 70.17).*

** *Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.*

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	13, 18	YES
	Claims	1-12, 14-17	NO
Inventive step (IS)	Claims	13, 18	YES
	Claims	1-12, 14-17	NO
Industrial applicability (IA)	Claims	1-18	YES
	Claims		NO

2. Citations and explanations

Claims 1 to 3, 5 to 7, 9 to 12 and 14 to 16

Document 1: JP 6-318500 A (Toshiba Corporation), 15 November 1994, entire text; fig. 1 to 10

Document 2: JP 2-5398 A (Shimadzu Corporation), 10 January 1990, entire text; fig. 1 to 5

Document 3: Microfilm of the specification and drawings annexed to the Japanese Utility Model Application No. 190022/1986 (Laid-open No. 95200/1988) (Asahi Roentgen Ind. Co., Ltd.), 20 June 1988, entire text; fig. 1 and 2

Document 1 sets forth an X-ray tube control device which controls an X-ray tube, wherein said device is provided with a storage means which stores a plurality of warming-up programs according to maximum tube voltage in order to raise the tube voltage of the aforementioned X-ray tube when the aforementioned X-ray tube is activated in a process according to the time the tube has been inactive; an extraction means which, when the maximum tube voltage of the aforementioned X-ray tube is changed, extracts from among the aforementioned plurality of warming-up programs stored in the aforementioned storage means a program which corresponds to the new maximum tube

voltage after the change; and an overwriting means which overwrites the warming-up program stored in the storage part of the control means which controls the operation of the aforementioned X-ray tube with the aforementioned warming-up program extracted by the aforementioned extraction means. Document 2 sets forth an X-ray tube control device which controls an X-ray tube, wherein said X-ray tube control device has a warming-up program to raise the tube voltage and tube current of the aforementioned X-ray tube to the maximum tube voltage and maximum tube current when the aforementioned X-ray tube operates. It would be easy for a person skilled in the art to conceive of constituting the warming-up program of the X-ray tube control device set forth in document 1 in such a manner that the tube voltage and tube current are raised, as described in document 2. In addition, as described in document 3, an X-ray tube control device which performs remote control of an X-ray tube is known, therefore it would be easy for a person skilled in the art to conceive of carrying out overwriting via a communications line when overwriting a warming-up program in the X-ray tube control device set forth in document 1.

Claims 4, 8, 12 and 17

Document 4: JP 6-13195 A (Shimadzu Corporation), 21 January 1994, entire text; fig. 1 to 4

Document 5: JP 4-87299 A (Shimadzu Corporation), 19 March 1992, entire text; fig. 1 to 3

Document 6: JP 61-218100 A (Toshiba Corporation), 27 September 1986, entire text; fig. 1 to 13

An X-ray tube control device, wherein a focusing lens is controlled in order that the focal point when an electron beam collides with a target is minimized, is a known feature, as described in documents 4 to 6, and it

would be easy for a person skilled in the art to conceive of storing a program to control a focusing lens in the X-ray tube control device described in document 1.

Claims 13 and 18

Documents 1 to 6 do not indicate that when there is no maximum tube voltage in a warming-up program which corresponds to the maximum tube voltage inputted into an input means, the inputted maximum voltage is matched with the warming-up program stored in the storage means in order that the maximum tube voltage in the warming-up program is higher than the inputted maximum tube voltage, and the difference is minimized between the maximum tube voltage in the warming-up program and the inputted maximum tube voltage, and said feature would not be obvious to a person skilled in the art.